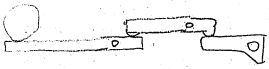
Plant Operations Notebook, N-92-00-00.1

This undated notebook was used by Edison, probably in 1893 or 1894, but possibly in 1895. It contains notes, drawings, and calculations regarding the manufacture of briquettes. The spine is labeled "128." The book contains 197 numbered pages.

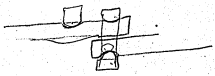
Blank pages not filmed: 14-187.

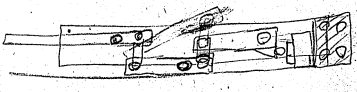
xE-172

N-(92-00-01)



①





Experiments on Bricks

(from Calculations)

Screw press 4 ft 8" from centre to end.

Lever filled square mould with prop. open on mock pressed mould lightly down by hand, then put in screw press - before any screw pressure mould plunger stood out 3/4 inch - ran lever around by pressure of thumb until thumb could do no more, then plunger stood 7/16 tested thumb pressure on Fairbanks scales 45 lbs best I could do - then put one hand on lever went around 1/4 of circle about all I could do plunger went down 1/16 standing at 3/8 then tried both hands & jumping & jerking went down 1/32 standing 11/32 Duncan Ulster got it 3 ft further around circle going from 1/64 standing 21/64 Duncan & Joe together went down another 1/64 standing 5/16 all they could do jerking in taking out brick accidently broke it - 2nd brick good dropped 3 ft in flow without breaking broke at 4 1/2 ft. was satisfactory brick, 3rd was a thick one nearly as good broke at 3 ft.

Suppose lever would be called a scant 4 ft where pressure applied.

Tried a very thin brick ½ in but was flexible – Thus to a point

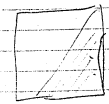
Bricks should be as thick as wide.

We now make a brick with a 9 foot lever bring a gas pipe extension its about 3/4 thick & with hand yet it dont see to be hard enough for the great pressure applied being thin ½ of it broke off in dropping 3 ft = The mud we are using I am sure is poor it lacks that peculiar stickey quality that makes good brick Harris is now making some of best Room Mud 30 Room 15 Oil Lamp – We will try this with direct lever and screw press –

(Just made a thick brick old mud 9 ft lever to see how would work This brick was stronger than thin one dropped 4 ft dont 6k broke 2nd time –

I notice that it takes nearly as much power to screw press brick at start as final pressure showing great friction

Bug The moulds were hollow



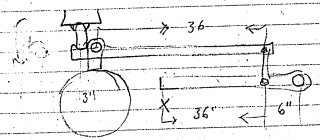
apparently just where greatest pressure, This must hurt brick in getting out —

New Muck Basin 30 Lime 15 —
dont appear extra good —
Tried one on press with Maximum
Thumb pressure — 4' 8" 45-46 —
brick not hard yet didnt break
2 ft drop 2nd time 3 ft
broke 1/2 in two —

Cyber

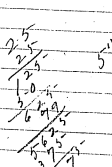
Tried another brick maximum right arm pressure - 4' 8" Lever -
Dropped 3' didn't break Dropped 3½ ft again Ends chipped off -
This is as good as the 9 ft lever with 2 men Big Tom + Duncan both hands jerking -

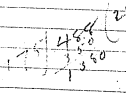
Tried one thumb pressure small old round worked dropped 4 ft only cracked in middle -

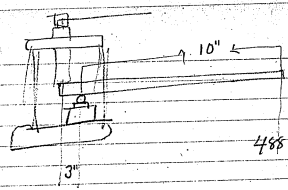


1000 lb at X 72000 at plunger

2.15 Round Squared is
4.93 say 5"

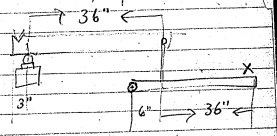






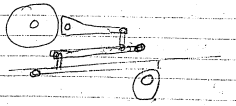
2 3/4 X 1 soft iron at best,
The brick (Brown 30 Lina 15") were 1st
Clean good enough dropped 2 ft
ok 3 ft ok 4 1/2 ft ok
4 1/2 broke — so with this
Muck + moved these pressures OK —
as we are going to use a 215
Circle by 1/2" deep — the pressure
as above was in a Dynamo
1.75" time question (10) Sep
250 lbs will answer

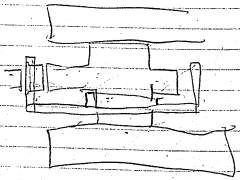
We are now trying a Compound lever

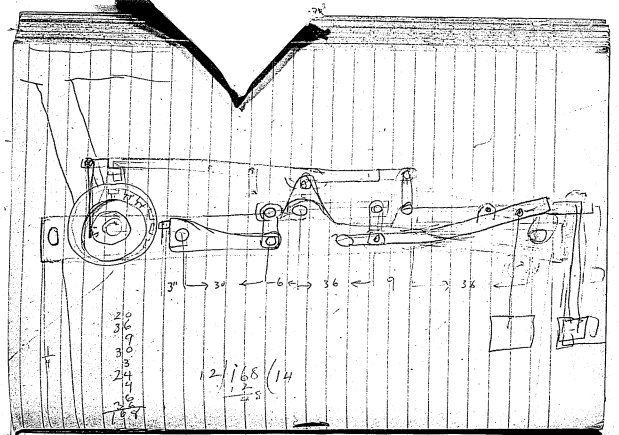


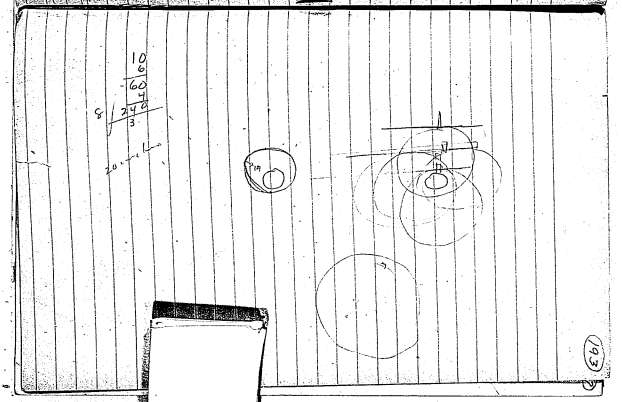
Using 250 lbs — at end X —
say with levers 280 lbs.

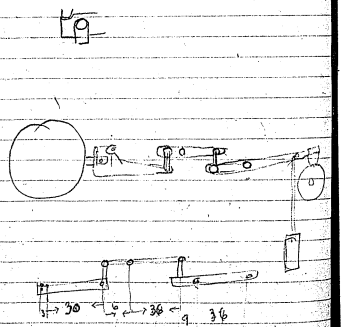
Brick was on 5/8 thick in big sqr
moved but very hard — didn't
break 6 ft drop on floor —
going try thicker one —
The ~~stone~~ big one broke in 2 ft
but made another — showed it
out of mould opposite way &
it went 4 ft without breaking
showing that moved closer
breaks them in showing out.






3"
3"
6
3 6
9
3 6
20
36
9
30
3
24
4
36
36
12 168 (14
12
5


10
6
60
8 24
3
20
Pin
9
103



3 × 10 = 17

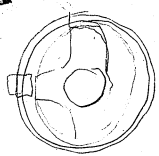
10 to 1	6 to 1	4 to 1
6 to 1		1 to 1
½ 1"	4"	1½"

60
240
250
12000
480
60.000

16
128
250
640
256
32000

96

17



100

130

6) 260
430.00

~~Full~~	H	Low	Full	H	Low
	100	50	100	150	50

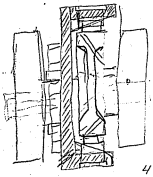
6 × 8

H full Low
150

18
8
144
28
172

36
79
324
272
28,44

15-c



8) 172
21,

36) 220 (6 1/4
216

450) 1728 (3.6
1440
2850